

WHAT INVENTORS MUST DO (AND MUST NOT DO) TO FULLY PROTECT THEIR INVENTIONS

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A. WHAT IS A PATENT?

A patent is a *legal* monopoly granted by the federal government to inventors of certain qualified inventions. A patent can protect any new, useful, and “unobvious” apparatus, process, chemical composition, and even a business method, and gives its owner the right to prevent all others (in the country of issue) from making, selling, importing and even using the patented invention (35 U.S.C. '271).

The “patented invention”, in turn, is that which falls within the scope of the patent’s “claims” (strangely worded, numbered paragraphs at the end of each patent that tell the public specifically that which the patent owner may prevent others from making, selling or using). A brief introduction of patent claims appears later in this article.

B. WHEN SHOULD ONE SEEK A PATENT?

A patent can be extraordinarily valuable, in part, because its protection, if valuable in the first place, extends from the grant of the patent until twenty years from the filing date of the underlying application (provided periodic maintenance fees are paid (35 U.S.C. '154)). It is the “utility patent” which is the most common and most useful type of patent for U.S. inventors (another kind of patent -- the design patent -- will be discussed below, and provides little protection for most inventions).

If one invents something that solves a problem or meets a need in a new, more efficient, more cost effective, and/or more effective way, and there is a market for such a solution, patent protection should be considered. Otherwise, the invention will eventually fall into the public domain and likely will be of no value whatsoever to the inventor.

A reason often cited by many who fail to seek patent protection is an intent to simply “sell their idea” to a company, and thereby avoid the expense of patent protection. Unfortunately, this is rarely a viable option, and the associated disclosure to third parties and delays in seeking patent protection, if at all, will often lead to a complete loss of the potential for patent protection.

An invention that is not the subject of *at least* a patent application has no legal protection, other than possible contractual confidentiality obligations (only applicable to those who actually sign

a confidentiality agreement), or trade secret protection (not feasible for any invention which must be made public for commercial gain, and which can be understood and replicated upon such public exposure). Therefore, most companies to whom inventions are offered for sale or license, without accompanying patent or patent application ownership potential, are unlikely to pursue the purchase or license. This is true because, without *at least* pending patent protection, such a company's competitors are perfectly free to take and copy the subject invention immediately upon learning of it, without paying anyone anything. It is the patent application or resulting patent for an invention which gives it protection and transferability. Otherwise the free enterprise rules (to which patents are merely legal exceptions) apply, and all are free to copy, improve upon, and compete for market share in selling the subject invention.

Inventors also sometimes fail to seek patent protection, if they feel that they will never be in a position to actually make the subject of their invention, such as when commercializing the invention would require significant manufacturing capabilities or expansive distribution networks. This is unfortunate, because a patent holder can (and most inventors do) license their patent rights to others who are better suited to manufacture or otherwise commercially exploit the underlying invention. In such cases, the patent holder simply collects royalties for the duration of the license, while the licensee, in essence, does all the work (manufacturing, distribution, sales, etc.).

C. WHEN IS AN INVENTION ENTITLED TO PATENT PROTECTION?

Generally speaking, an invention may be protected by patent if: (1) it fits into one of the legal categories of protectable inventions (as mentioned above: a mechanical device, a machine, a chemical compound or composition, a process, or a business method (35 U.S.C. '101); (2) the invention is new ("novel") -- no one else has, before certain prescribed dates, either patented, used, sold or otherwise publicly disclosed the invention which is sought to be patented (35 U.S.C. '102); (3) the invention sought to be patented would not be "obvious" to persons skilled in the relevant field of technology, when it is viewed in light of the knowledge which such persons would ordinarily have (35 U.S.C. '103); and (4) the invention is "useful" (i.e. it meets some previously unmet need, or does so better than prior solutions (35 U.S.C. '101). A more detailed discussion of the sometimes confusing issues of novelty and obviousness also appears later in this article.

D. THE PATENT PROCESS.

The process for seeking patent protection can be divided into two primary stages: (1) researching the apparent patentability of the invention; and (2) formally entering the patent system by filing a patent application.

1. Patent Research.

In most cases (though not all), an inventor's patent attorney will, before filing a patent application, conduct a preliminary investigation to determine whether or not patent protection for a particular invention appears to be available. No such investigation will establish patentability with absolute certainty, in part, because certain circumstances that may prevent patent protection simply cannot be researched (recently filed patent applications, for example). Also, because patentability research usually has as its sole, legitimate purpose the determination of whether or not seeking patent protection appears to represent a reasonable financial risk, research which is possible, but which would cost as much as, or more than the patent application itself (extensive foreign patent and literature research, for example) can seldom be justified, even though foreign patents and references may ultimately prove equally fatal to a patent application than can a domestic reference.

In short, patentability research is designed merely to determine if a patent-blocking reference ("prior art" as it is known in the patent field) is immediately apparent, after a reasonable degree of inquiry.

Ideally, patentability research will involve both the inventor and the patent attorney. The inventor will be able to assist in the research by calling upon his or her own knowledge of related inventions in the relevant field of technology and by relating those to the patent attorney. In addition, literature searches, best conducted by the person(s) most familiar with the field, can help immeasurably. The role of the patent attorney is most often in conducting a search of the records of the Patent & Trademark Office. The objective is to locate the most pertinent issued patents upon which a patent examiner would rely in judging patentability. On average, a patent search requires about three week's time. The process can be accelerated if necessary.

It should be noted that patentability research is only designed to give some indication of the likely patentability of an invention, and is not at all designed to determine whether or not making or practicing any particular invention will infringe an earlier patent. It is entirely possible to obtain a (very valuable) patent that covers an invention which, if made or practiced, may infringe an

earlier patent. This seems like a paradox to many, but, for reasons described below, is not necessarily so.

2. The Patent Application.

If the results of the patentability research reveal nothing which would clearly stand in the way of patent protection, the next step in the process is to prepare and file a patent application with the United States Patent & Trademark Office. This is a task which can only be performed professionally by a person who is licensed to practice before the Patent & Trademark Office (a "registered patent attorney" or "patent agent"). Easily 99% of attorneys are not licensed to practice before the Patent Office and cannot legally represent an inventor in seeking a patent.

A patent application is not simply a form with blanks to fill in, but is rather a very lengthy and complex legal document. Most often, the patent attorney will spend quite a number of working hours to prepare the patent application. The inventor will ordinarily be consulted at a number of stages along the way to insure that the description and claiming of the invention is consistent with the inventor's conceptions.

When the patent application is complete, the inventor will be asked to carefully review the application itself and to review and sign an inventor's "Declaration and Power of Attorney." This latter document is one in which the inventor, under penalty of perjury, verifies the true inventorship of the subject invention, and appoints the named patent attorney to represent the inventor before the United States Patent & Trademark Office.

Some time after the filing of a patent application (around a year, at the time of this article) the application is assigned to a patent examiner, whose job it is to determine whether or not the invention is, in fact, patentable. The patent examiner conducts patent and literature searches to determine whether or not the precise invention sought to be patented (as defined by each claim) has already been patented and/or whether or not past information in the relevant field of technology makes the invention "obvious".

In addition to comparing the scope of the submitted patent claims against the "prior art", the patent examiner will examine the "specification" of the patent application (the detailed description, usually including drawings, of the details of making and using the subject invention). At this stage, the examiner is to determine whether or not the inventor has satisfied the requirements of patent law (35 U.S.C. '112) that the patent application provide an "enabling disclosure." An

enabling disclosure is that description, in words and drawings that sufficiently teach the making and use of the subject invention, such that one who is reasonably skilled in the field of the invention may do so without undue experimentation. Full disclosure of every aspect of an invention, including the best envisioned way(s) to make and use the object of the invention, is part of the bargain that the inventor makes with society in being granted patent protection. When an inventor opts for patent protection, nothing can be withheld in terms of details of the invention and its highest and best use. If any such information is withheld from the patent application, any resulting patent will be invalid.

A patent examiner's opinion of patentability is communicated by way of an "office action" in which the examiner sets out, with respect to each patent claim, the reasons why the claim does, or does not, encompass a patentable invention. The office action may include rejections of some, all or none of the original claims and will explain the basis for the rejection(s), if any. Most often, rejections of any given claim will be based on one or more earlier patents which the examiner's research has uncovered.

An office action is not the "final say" with respect to patentability. In fact, one should usually expect a first office action rejection of at least some of the patent claims. The patent attorney can, depending on the circumstances, respond to any rejections of claims with arguments which attempt to refute the bases for such rejections, with amendments to the claims that adjust their scope to a patentably permissible degree, or some combination of both. An experienced patent attorney will be able to secure an allowance of the patent in the vast majority of cases in which initial patentability appeared likely, and the patent examiner fails to cite any previously unknown or insurmountable item of prior art.

If the patent attorney and the examiner come to an agreement about the proper scope of the patent claims, the applicant must then pay an issue fee, if the patent is to issue. The time between filing of a patent application and issuance of a patent typically extends anywhere between eighteen to thirty months, depending on the degree of backlog of patent examiner who is assigned the patent application. If, on the other hand, the patent attorney and the examiner do not reach an agreement on the appropriate scope of patent protection by the time of the second office action, the patent attorney can appeal the examiners' decisions (35 U.S.C. '134), or can file a "continuation

application” for a second round of examination and argument with the Patent Office (35 U.S.C. '120).

All of the above procedures are designed to produce patents which fairly award patent protection to worthy inventors, but which does not take from the public anything which is already in the public domain. It is a long and complicated process, but one which typically works very well in the end.

E. PITFALLS FOR THOSE WHO WAIT TOO LONG.

The cardinal rule for anyone interested in seeking patent protection is to err on the side of filing for patent protection before making any disclosure of the invention to anyone else. This is not always possible (or even necessary), but should be the first inclination of an inventor who wishes to patent his or her invention. The proper approach for specific circumstances should be addressed to a registered patent attorney.

Simple delay in filing for patent protection (if long enough) can result in abandonment of inventions (loss of inventions to the public domain). Most often, however, abandonment results from a delay of more than one year in filing for patent protection after some form of public disclosure of the invention.

The root of this problem stems from the underlying rationale of the patent system itself. The patent system is based on the dual premise: (1) that society is best served through the advancement of science and technology, and (2) that science and technology are most effectively advanced by rewarding those who fully and promptly disclose their patentable inventions to the public at large by way of patent applications and resulting patents.

As mentioned above, the potential reward for such full and prompt disclosure is a patent which represents an assignable legal monopoly for the patentee to make, use and sell the invention in the country of issue.

The specific mandate of the United States patent statutes which encourages prompt filing for patent protection is, pursuant to 35 U.S.C. '102, that an inventor file for patent protection, if at all, within one (1) year of the earliest of:

- (1) the first printed publication or patent (anywhere in the world) in which the invention was described;
- (2) the first sale or offer for sale of the invention in this country; or

(3) the first public use of the invention in this country.

Publishing an article about an invention in a journal, presenting a paper at a symposium, offering the invention to a company for licensing, and using a device in a non-experimental commercial context are all examples of events which ordinarily begin the elapse of the one year grace period. If a patent application is filed in the United States one day after the passing of one year of any such events, the resulting patent, if any, will be completely and irreparably invalid.

F. "PATENT PENDING".

While a patent application is pending, the application's owner (either the inventor, or someone to whom the application has been assigned) has the right to identify products of the invention as "patent pending". While, contrary to popular belief, this designation does not legally prevent others from copying the invention, it is often a well recognized deterrent to copying, as reflected by the penalties which apply to falsely claiming "patent pending" (35 U.S.C. '292).

As a practical matter, one who sees "patent pending" on or in association with a product is faced with two, at least temporarily unanswerable questions: (1) what kind of patent protection can the applicant ultimately get in this case?; and (2) if a patent is to issue, when will it issue? Because of the strict secrecy of pending patent applications for the first 18 months of their pendency, no one but the inventor, the inventor's employer (if applicable), the patent attorney, and the patent examiner(s) can find out what a pending application claims or when the application was filed.

Therefore, anyone who is thinking about copying a product which is marked "patent pending" must reasonably consider that any investment for tooling up to practice the invention, to hire personnel, to advertise, to establish distribution, etc. may well be wasted, if a patent covering the product does ultimately issue. One must consider that this (the patent issuance) could happen immediately, or years down the road. For many, this dilemma presents too much of a gamble and they tend to avoid copying "patent pending" products, even though the law does not require that they do so until/unless a patent actually issues. In short, the "patent pending" designation is often viewed as a very valuable, practical deterrent to invention copying, even though it is not a legal deterrent.

An important caveat is needed with respect to "Patent Pending." One cannot enjoy the benefits of the "patent pending" designation, unless a patent application with claims fairly seeking to

cover the subject product has actually been filed. A penalty of up to \$1000.00 per incident of “false marking” is possible under federal statute.

G. FOREIGN PATENT PROTECTION.

Most foreign countries have patent systems which grant rights similar to those described here for U.S. patentees. Currently, there is no such thing as a truly "international patent." Each country, and some groups of countries (the European Community, for example), each have their own patent systems.

When considering foreign patent protection, an inventor must simply decide which countries or regions represent sufficiently valuable markets for the subject invention to justify the often high cost of foreign patent protection. With respect to some countries, one must also consider the degree to which any patent can reasonably be enforced, because a patent issued by a country with an ineffective patent enforcement system is of no value at all.

It is vitally important to note that most foreign countries do not allow any grace period for filing a patent application after public disclosure of an invention (such as the one year grace period of the U.S. patent system described above). A filing date for a patent application in such countries must precede any public disclosure (anywhere) of the underlying invention, if valid patent protection is to be available. This is known as the rule of “absolute novelty.”

Fortunately there are treaty-based procedures (35 U.S.C. '351) whereby one may file a single patent application in his or her own country, which application will suffice for establishing a filing date in most foreign countries, provided certain procedures are strictly observed thereafter. A U.S. inventor, for example, need only file one patent application with the United States Patent & Trademark Office prior to publicly disclosing or exploiting the invention, and the right to obtain patent protection (in most foreign countries) can still be preserved, though the foreign patent applications will not actually be filed until well after the public disclosure.

If the U.S. filing date is to “count” as the filing date in most foreign countries, the inventor (or invention owner by assignment) must, within a year of the U.S. patent application filing, either file the same application in the country or countries in which patent protection is desired, or file a Patent Cooperation Treaty Application (which extends the deadline for filing in the individual foreign patent offices for up to 32 months from the United States filing date).

In either event, if the subject country or countries are signatories of the referenced treaties, the U.S. filing date will be honored as the filing date in such countries for purposes of overcoming the absolute novelty rule. While most countries of interest to U.S. inventors or invention owners are signatories of the relevant treaties and conventions, one should consult their patent attorney with respect to countries of specific concern, before any public disclosure of an invention.

Finally, when speaking of foreign patent protection it is important to debunk a common myth -- that foreigners can, to get around U.S. patents, simply copy inventions abroad and then ship the products into the U.S. If the only concern of an inventor is that their invention will be copied, sold or used in the U.S., a U.S. patent is sufficient. Infringing products can be stopped at the borders through a variety of means. An inventor needs foreign patent protection only if he or she wants to be able to prohibit copying and sales in foreign countries.

H. HOW DOES PATENT PROTECTION WORK?

1. Patent Claims

As mentioned earlier in this article, a patent's *claims* define what does and does not infringe the patent, or what is "covered" by the patent. A patent's coverage is NOT defined by the written description of the invention, the drawings in the patent, the title, or any other part of the patent, though such components may aid in interpreting a claim.

Much as a property description on a land deed precisely defines where strangers cannot go without trespassing, a patent's claims define that which the public cannot legally do or make without infringing the patent during its term. If someone wants to know whether or not they are infringing a patent, they look to the CLAIMS. If someone wants to invalidate a patent, they look to the CLAIMS. In the later case, it is the CLAIM that should, or should not, have issued, and upon which patent protection relies.

Very generally, a patent claim works as a "checklist for infringement." Each limitation or element of a claim is something that must be found in a third party's product or process, if that product or process is to be "covered" by the patent. On the other hand, each of these checklist items must also be found in the prior art before certain critical times, if the focus is not infringement of a claim, but rather of its invalidity.

Suppose a patent claim for a hypothetical machine ("widget") reads:

1. A widget comprising:

A,
B,
C, and
D.

For purposes of our example, each of “A”, “B”, “C”, and “D” represents a machine component, whereas in process or chemical composition patents, they might represent, respectively, process steps or chemical constituents. For example, in a patent claim for a machine, “A” in this example might read “an electric motor”, and “B” might read “a gearbox, interfaced with said electric motor”, and so on.

Assuming that this claim is valid (I will later discuss issues relating to claim validity), anything that someone other than the patent owner, or a licensee of the patent owner makes, sells or uses and which includes (*BUT IS NOT LIMITED TO*) A, B, C and D will infringe the claim. The word “comprising” is the part of the claim that means “including, but not limited to.” So, if someone, without permission of the patent owner, builds a widget with **A, B, C, D**, E, F, G,....R, he or she is still infringing the above patent claim, because the widget *includes* A, B, C, and D. It does not matter that E, F, G,....R is added. One does not avoid infringement of a valid claim by *adding* elements or characteristics, only by eliminating one or more listed elements, such that the “checklist” is not fully satisfied.

Most patents have a number of claims, and each numbered claim stands independently in defining the owner’s patent protection. In essence, each claim is truly a separate, independent patent, at least in terms of that which is covered by the patent.

Most patents have multiple claims only so that the owner has fall-back positions, in the event that some of the broadest claims are later found to be invalid. If the broadest claim(s) survive, the narrower claims are irrelevant.

Suppose our hypothetical patent also includes the following claim:

2. The widget of Claim 1 further comprising:
E.

This is known as a “dependent claim”, and is read to include everything of the claim to which it refers (claim 1 in this case), plus the recited extra element (E).

Now assume that Claim 1 is found to be invalid. So far as the subject patent is concerned, everyone is now free to make a widget “comprising” A, B, C, and D, because such a widget would no longer satisfy the broadest *surviving* “checklist” (which now includes E), and A - D is in the public domain. Only a widget with A, B, C, D, *and* E would now satisfy the broadest checklist for infringement (patent claim) of the patent and would, therefore, infringe the patent. Only if all claims of a particular patent are found to be invalid does a patent become wholly ineffective.

The same principles apply to each of any number of claims in a patent -- each claim essentially constituting a separate patent, each claim standing or falling on issues of validity to which I will now turn.

It bears emphasis that many acts, thought by many as safe ways to “end-run” a patent, may very well amount to patent infringement. The discussion thus far focuses on the simplest form of patent infringement - the making, selling or using of anything which fully satisfies a patent’s “checklist for infringement.” However, under certain circumstances, making, selling, using, or importing only a subset of the checklist items may still constitute infringement, and even “inducing” someone else to infringe may create liability for patent infringement (35 U.S.C. '271). Analysis of the many variations of patent infringement is beyond the scope of this article. Therefore, a patent professional must be consulted if concerns over patent infringement arise, both to assess the likelihood that infringement may have occurred, and to take the steps necessary to meet any allegation of infringement.

2. Validity.

There are a number of issues that can affect the validity of a patent’s claims, but two issues - novelty and obviousness - are usually of most significance in patent cases. Generally speaking, a claimed invention must be both “novel” and “unobvious” when viewed against that which was known to the public (the “prior art”): (1) before the act of invention by the subject inventor; and (2) at any time more than one year before the filing of the patent application (for U.S. patents).

a. Novelty. As briefly mentioned earlier, Section 102 of the patent statute (35 U.S.C. '102) provides that a claim will not be valid if the combination of all of its limitations (A, B, C, etc., as above) were publicly known, either prior to the invention by the patent applicant, or

more than one year before the filing of the patent application. For example, if a patent application were filed on January 2, 2006, its sole claim were the one from our example above, and a Widget with parts A, B, C, and D were on the market before January 2, 2005, the claim cannot properly be allowed by the Patent Office, or if allowed, will not be sustained in court.. Also, no matter when the application was filed, if the widget with A, B, C, and D were on the market before the invention by the subject patent applicant (we are supposing here that two people invented the same thing, and the latter inventor is seeking patent protection) the patent claim likewise cannot validly issue. The same would be true for our above example of Claim 2, if A - E were publicly known before the critical dates.

b. Obviousness. Section 103 (35 U.S.C. '103) of the patent statute represents an additional condition for patent protection, though not one which is considered until or unless novelty is already established. Section 103 provides that no valid patent claim can merely include elements which, though never proved to be assembled in one place before (as would be the issue for novelty) would represent an obvious combination to a person who is reasonably skilled in the relevant field of technology. For example, even if no one could be proven to have ever assembled the combination of elements from the above hypothetical claim - A, B, C and D - that claim cannot validly issue if it would have been obvious to someone reasonably skilled in the widget field to assemble that combination of elements, if only presented with the need or problem for which the widget was intended.

Therefore, suppose that A, B, and D were, in combination, well known and used before the invention of A, B, C and D and/or more than one year before its patent application was filed. However, no one ever thought to add C to the mix. If, to a person reasonably skilled in the widget field, it would have been obvious to combine C with A, B, and D to provide whatever benefit for which the widget was intended (simply a case of no one ever getting around to doing it), then the A, B, C, and D claim cannot be valid. It is only if adding C to A, B, and D would NOT have been obvious to a person reasonably skilled in the relevant technology field (at the time of the invention) that our widget claim with limitations A, B, C, and D would be allowable.

3. Overlapping Patents.

It is often a point of confusion to some to learn of patents (claims) that “cover” inventions, part of which are also “covered” by prior patents (claims). Such a situation does not necessarily mean that the latter patent (claim) is invalid.

How can this be? There are only four basic requirements for patent protection: (1) novelty of the claimed invention (all elements of each claim); (2) non-obviousness of the claimed invention; (3) usefulness or “utility” of the invention; and (4) that the invention is within the subject matter categories that are protectable under patent law. Contrary to popular belief, the mythical fifth requirement - that making the patented invention would not infringe an earlier patent - simply does not exist.

Suppose, for example, that Smith owns the patent with our A, B, C and D claim (assume that this is the only claim in Smith’s patent). Now suppose that a second inventor, Jones, invents an improved widget which includes A, B, C, D and X. If A, B, C, D, and X is a new combination (Section 102), and it would not have been obvious to add X to satisfy whatever need that A, B, C, D, and X addresses (adding X makes a much better widget), then Jones may be able to get a perfectly valid patent claim which covers A, B, C, D, and X. This is true, even though Jones will infringe Smith’s patent, if he, without Smith’s permission, builds a widget with A, B, C, D, and X (with, or without additional components). Building A, B, C, D, and X would infringe the Smith’s “dominant” claim (having only A, B, C, and D), because A, B, C, D, and X satisfies the Smith’s “checklist for infringement” of A, B, C, and D.

A situation involving dominant and subordinate patents does not at all mean that the subordinate patent is worthless. If Jones’ widget with A, B, C, D, *and* X is, in fact, the best widget ever made, there is likely a lucrative market for the product.

In our hypothetical, Smith, who owns the patent with the claim of A, B, C, and D, would be foolish to simply shut down Jones and prohibit the making of A, B, C, D, and X. If typical of most such cases, Smith should, instead, license his patent to Jones and take royalties. This way everyone wins, including the consuming public, because the latest and best technology is available to the marketplace. This is the way that most of these situations are resolved to everyone’s benefit.

Can Smith, who has the “dominant patent”, make A, B, C, D, and X without Jones’ permission? After all, A, B, C, D, and X is “covered” by Smith’s A, B, C, and D claims. The answer

is no. Smith cannot make A, B, C, D, and X, because that would infringe the Jones patent (it would satisfy Jones' checklist of A, B, C, D, and X). It is for this reason that even a subordinate patent (such as Jones') may still have considerable value.

In our example, the likely best resolution of the dominant/subordinate patent situation involves, not only Smith licensing Jones to make that which includes A, B, C and D, as mentioned above, but Jones also licensing Smith to make A, B, C, D, and X. This arrangement is known as a "cross license." Under this arrangement, each party is allowed to make, use, etc. that which is covered by their respective patent and (presumably) everyone makes money by selling the most desirable product with the greatest market potential. Absent such an arrangement between dominant and subordinate patent holders, a stalemate exists, both parties lose economically, and the consuming public is denied the products and benefits of the latest technology.

4. Old Parts Do Not Mean Invalid Patents.

As may be clear from the preceding section, the fact that part of a prior invention or patent is well known does not mean that a patent cannot be obtained on a new combination of old parts, or even a new use for something that is old and well-known.

As the above example as relates to Smith and Jones points out, just because Smith already invented and patented A, B, C, and D does not mean that Jones cannot patent his invention of A, B, C, D, *and* X.

An easily remembered example of this principle comes from a patent infringement case of many years past. In that case, the defendant (the accused infringer) was arguing that the subject patent should be invalidated because "all the inventor did was just put a bunch of old parts together in a new way" (or words to that effect). In a famous and oft-quoted court opinion, the judge wrote his reply: "Only God works from wholly new parts." This points to the fact that every invention is, to one degree or another, a mere rearrangement of existing parts, steps, or connections.

Sections 100 and 101 of the United States Code (portions of the federal patent statutes) embody the concept that improvements on existing inventions, and even merely new uses of old things are patentable, if only the claimed combination of features, improvement, or new use is, in its entirety, new, unobvious, patentable subject matter, and useful:

35 U.S.C. '100

When used in this title unless the context otherwise indicates -

- (a) The term "invention" means invention or discovery.
- (b) The term "process" means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.

35 U.S.C. '101

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title (emphasis added).

I. THOUGHTS ABOUT PROVISIONAL PATENT APPLICATIONS

A fairly recent development in U.S. patent law is that of the "Provisional Patent Application." The provisional patent application was billed, in part, as a way for inventors to save money. This author believes that, in many cases, use of the provisional application ultimately *increases* costs to inventors, though there are occasions when such a filing is appropriate, or even unavoidable. Of greater concern is my belief that the use of provisional patent application procedures exacerbates certain risks to ultimate patent protection, when compared to traditional, non-provisional applications.

A provisional patent application is widely believed to "save" money by eliminating the requirement for patent claims, the drafting of which does indeed require considerable legal expertise and time (and, therefore, money). Also, the filing fees for provisional patent applications are much lower than for a non-provisional patent application. However, if a patent is to ever issue on the subject of a provisional application, the provisional application must be converted to a non-provisional application (essentially the same application as

could have been filed at the outset) within one year of the original filing. It is at this stage that the “savings” of a provisional application become illusory.

Additional expense to inventors arises, in part, when the patent attorney, after doing nothing on the patent application for up to a year, must “get up to speed” on the subject matter (for the second time) to convert the application to a non-provisional application, one part of which involves drafting the claims. Also, the filing fee for converting the provisional to the non-provisional patent application is the same that would have been paid at the outset, had a non-provisional application been filed. This fee is in addition to the initial provisional filing fee, so there are no filing fee savings whatsoever in pursuing the provisional patent application route, if patent protection is ever to be achieved.

In this author’s opinion, the greater danger associated with provisional patent applications is unrelated to extra expense, but to ultimate ability to obtain a valid patent (at any cost). Both provisional and non-provisional patent applications must include, *at the time of filing*, the earlier-referenced “enabling disclosure” -- sufficient information to allow a person who is reasonably skilled in the relevant field to make and use the claimed invention without undue experimentation. If an application (provisional or non-provisional) is found to have lacked an enabling disclosure, its effective filing date is lost, and with it, any satisfaction of filing deadlines otherwise provided by the application (filing within one year of a public offering for sale of the subject invention, for example).

So, how is a provisional patent application more problematic in relation to enabling disclosures? A provisional application essentially sits at the Patent and Trademark Office, with no substantive action or evaluation whatsoever. It is only when/if the application is converted to a non-provisional status that any examiner determines whether or not the applicant has satisfied (among other things) the requirement for an enabling disclosure.

Assume that: (1) an applicant files a provisional application after a public offer for sale, description of the invention in a printed publication, etc. (but before the one year deadline); (2) the application is converted to a non-provisional application after the one year deadline; and (3) the application is found, upon examination, to lack an enabling disclosure.

In such a case, it is too late to correct the problem -- the invention is irrevocably lost to the public domain. It is as if no patent application was ever filed, and the one year deadline for

doing so has passed. If a non-provisional application had been filed instead, the applicant might have had a chance to learn of, and correct the problem in time to beat the one year deadline.

For these reasons, this author believes that provisional patent applications should be used only when circumstances make preparing a non-provisional application, including claims, not feasible (such as when an inventor waits until the “last minute” to decide to file an application).

J. DESIGN PATENTS

Almost everything discussed so far in this article has concerned utility patents. Also available are plant patents and design patents. Plant patents are of little concern to most inventors and will not be discussed here. However, design patents are worthy of mention because they are, unfortunately, often used in deceiving unsuspecting inventors.

Design patents merely protect the aesthetic appearance of manufactured items -- basically how products look apart from their purely utilitarian features. Under the right circumstances, design patents can be very valuable. However, for the vast majority of inventions, design patents are worthless, or very nearly so. Most products of invention can be designed to look any number of ways other than the way they are depicted in a design patent. Therefore, the inventor who has only a design patent cannot stop anyone who copies his or her invention, so long as the copier sufficiently changes the way the item *looks*.

The primary problem with design patents lies with their abuse by certain invention companies who promise "patent protection" to unsuspecting inventors, without explaining the critical differences between design and utility patents. These companies seldom disclose that design patents are virtually worthless in preventing most types of invention copying. It is far too common for inventors to spend many thousands of dollars with invention companies (sometimes more than would have been required to obtain legitimate

utility patent protection through a reputable patent attorney), only to end up with an unrealistically optimistic “product evaluation and market study), a virtually useless design patent, and a usually meaningless “introduction of the invention to industry” (the main selling point for typical invention companies).

Most states require that invention companies disclose to prospective customers the number of customers who have received more money in royalties and license fees than they paid the invention company for the purported marketing, patent and publicity services.

A very telling statistic is that the number of such customers, for most invention companies known to this author, is usually zero. Therefore, one should always look at this disclosure document before paying any money to any invention company, and take the information into consideration before entering into any legal relationship with them.

K. CHOOSING A PATENT ATTORNEY.

The most important considerations for inventors include: (1) the patent attorney's knowledge of the field of technology in which one's invention falls; (2) one's comfort level in dealing with a particular patent attorney; and (3) the overall price at which the attorney will perform high quality services. On this latter point: one should not simply look for the “cheapest” patent attorney whom they can find. There is almost always a “get what you pay for” element to any choice for professional services. Furthermore, hourly rates are rarely indicative of the value that one will receive from a patent attorney. By way of illustration: one will usually pay a much higher hourly rate for an experienced, partner level patent attorney than for a second year junior associate. However, rest assured that the partner, with years of experience, can accomplish more in one hour than the two year associate can accomplish in several hours.

It is also this author's opinion that patent litigation experience is a strong “plus” for any given patent attorney. Having fought over the work product of patent attorneys' initial product in the most rigorous test possible (patent litigation in Federal Court) gives a patent attorney considerable insight into “preparing for the worst” when drafting a patent application. This experience and insight simply cannot be achieved any other way, in this author's opinion.

K. CONCLUSION.

Obtaining a utility patent is a lengthy and complex process. However, obtaining the exclusive right to make, sell and use the invention or to collect royalties for allowing others to make, sell or use the invention can be a very profitable undertaking. With quality assistance by a registered patent attorney, the process need not be confusing or unnecessarily expensive for the inventor.

This article is intended to provide an overview of the patenting process, and not to provide specific legal advice for any reader. Each specific situation involves variables which determine the precise path the inventor should take to properly protect his or her invention. Questions related to any specific patent situation should be promptly addressed to a registered patent attorney.

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Mr. Henry's private practice includes prosecuting patent and trademark applications before the United States Patent and Trademark Office and in patent offices throughout the world. His clients range from Fortune 100 companies and University Systems to individual "backyard inventors." As an active intellectual property litigator, Mr. Henry is also involved, at any given time, in a number of federal court actions throughout the U.S. (and some in Canada) concerning claims of patent, trademark, or copyright infringement.

Mr. Henry is a Lieutenant Colonel in the United States Air Force's Auxiliary where his unit flies humanitarian, search and rescue and disaster relief missions under auspices of the U.S. Air Force and a variety of federal and state emergency services agencies. Mr. Henry also channels his passion for aviation into his private practice as he flies, nationwide, to meet clients and manage his various patent and trademark projects and cases. It

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